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## THE ANTIQUITY OF THE ICHNEUMONIDÆ.

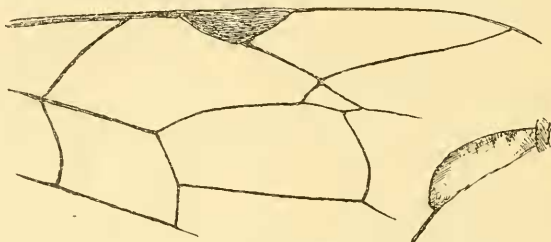
BY T. D. A. COCKERELL.

OUR principal source of information on fossil Ichneumonidæ is the important work of Prof. C. T. Brues, "The Parasitic Hymenoptera of the Tertiary of Florissant, Colorado," in 'Bulletin of Museum of Comparative Zoology,' January, 1910. Brues remarks that the only parasitic Hymenoptera yet discovered in pre-tertiary formations is the *Ephialtites* of Meunier, which was described from the Upper Jurassic of Spain. For this fossil Handlirsch proposes a family, "Ephialtitidæ," but its characters are very obscure. Viereck remarks that it looks like an Aulacine (Evaniidæ), but there is really little resemblance. Handlirsch notes that Meunier's reconstruction does not agree well with the photograph. The venation cannot be determined at all. Consequently I am rather at a loss to understand why Brues should refer to the "quite typical character of *Ephialtites*," or regard it in any way as satisfactory evidence. It must, I think, be altogether discarded as evidence of the mesozoic origin of the Ichneumonidæ. Brues goes on to note the abundance of Ichneumonidæ and other parasitic Hymenoptera in the Tertiary rocks as far back as the Lower Oligocene. He did not know that certain fossils of the Rocky Mountain region are still older than this, coming from well down in the Eocene. These, which must be at least two million years old, and probably more, are the oldest known Ichneumonidæ. Scudder described five of these Eocene ichneumons, supposing them to be of Oligocene age. One (*Ichneumon petrinus*) is from Chagrin Valley, White River, Colorado; the other four, assigned to *Lithоторus* (new genus), *Rhyssa*, *Glypta* and *Eclytus*, are from Green River, Wyoming. The *Ichneumon petrinus* is evidently an ichneumonid, but on account of its imperfect condition its generic position is quite obscure. The *Lithоторus* is referred by Brues without question to the modern genus *Mesochorus*. Concerning the other three it can at least be said that they are veritable ichneumons, with no visible characters separating them generically from living forms. I have now to add another Eocene

species, quite agreeing with the modern *Pimplinæ*, and referable to *Pimpla* in the old, broad sense :

*Pimpla cocenica*, n. sp.

Ferruginous, with black head and terebra, and mesothorax and scutellum fuscous, perhaps black in life. Wings clear, the venation rather dilute fuscous. Head rather small; thorax convex dorsally in profile; abdomen broadly sessile, very obtuse apically. Head and thorax, 3.5 mm.; anterior wing, 6.5 mm.; abdomen, 4.5 mm.; terebra projecting 1.95 mm. beyond abdomen. Measurements of anterior wing in microns: basal nervure, 960; depth of stigma, 400; depth of marginal cell above areolet, 655; depth of areolet 208, its length 512. Green River shales, spring



at head of Little Duck Creek, Cathedral Bluffs, Colorado. (Dean E. Winchester, U.S. Geological Survey.) Among the Florissant species this is nearest to *P. rediviva*, Brues, differing in the coloration and the long areolet. The coloration recalls that of the living *Mesostenus thoracicus*, Cresson. The shape of the areolet suggests *Theronia* and related genera, and it might be permissible to refer the species to *Theronia*. In any event, we have definite proof of the existence of typical *Pimplines* as far back as the Eocene, and there is so far no proof that any of the Eocene species should be separated from modern genera.

Thus, although we dismiss *Ephialtites* as unsatisfactory evidence, it cannot be doubted that the Ichneumonidæ, so well developed in the early Tertiary, originated at least as early as the later Mesozoic.

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THE VARIATION OF *SARROTHRIPUS REVAYANA*,  
SCOPOLI.

BY W. G. SHELDON, F.Z.S., F.E.S.

(Concluded from p. 106.)

*Afzeliana* Group.

The principal characteristic of this group is the development of the dark triangular central costal blotch, which in the majority of the forms extends half-way across the superiors,